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--ABSTRACT OF THE DISCLOSURE

An emitter for emitting electromagnetic pulses includes a generator for generating an electromagnetic pulse, an optical fiber that transmits the electromagnetic pulse, and an optical cavity. The optical cavity is placed in the path of the incident electromagnetic pulse transmitted by the optical fiber and has an input provided with a first partially reflecting mirror and an output provided with a second partially reflecting mirror. The first partially reflecting mirror is placed between first and second fiber lengths of the optical fiber and the second partially reflecting mirror is placed between the second and a third fiber length of the optical fiber. The length of the second fiber and a transmission/reflection ratio of the first and second mirrors are adjusted such that a train of electromagnetic pulses, having variable geometry characteristics, is emitted.--